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conc.

tube to expose the fluorescent substance in a volume of the fluid defined by the beam size or the beam size and the interior of the capillary tube to electromagnetic radiation; and
a detection device configured and disposed to [measure] detect fluorescent light emitted from the fluorescent substance at an angle to the direction of the beam when the microparticle is in the capillary [chamber] volume and provide an output signal.

2. (unchanged) The device of claim 1, wherein the microparticle is a microorganism.
3. (unchanged) The device of claim 1, wherein the microparticle is a bacterium, virus, or parasite.
4. (unchanged) The device of claim 1, wherein the microparticle is a CD4 cell.
5. (unchanged) The device of claim 1, wherein the microparticle is a fluosphere.
6. (unchanged) The device of claim 5, wherein the fluosphere has been ingested by a filtro-feeder.
7. (unchanged) The device of claim 6, wherein the filtro-feeder has a feeding rate sensitive to a toxicant level in the fluid sample.
8. (unchanged) The device of claim 1, wherein the fluorescent substance is a dye-conjugated antibody.
9. (unchanged) The device of claim 1, wherein the fluorescent substance is a DNA stain.
10. (unchanged) The device of claim 1, wherein the fluorescent substance has a magnetic charge.
11. (unchanged) The device of claim 10, further comprising:
a magnetic element positioned in a surrounding relationship to the capillary, the magnetic element having a magnetic charge which repels the fluorescent substance.

12. (unchanged) The device of claim 1, wherein the fluid delivery system is a syringe coupled to a syringe pump.

13. (unchanged) The device of claim 1, wherein the fluid delivery system is a peristaltic pump.

14. (unchanged) The device of claim 1, wherein the source of electromagnetic radiation is at least one laser.

15. (unchanged) The device of claim 1, wherein the detection device is an array of detectors.

16. (amended) The device of claim 1, including a photodetector for collecting fluorescent light from the capillary volume and providing an output signal.

[A device for detecting a fluorescent substance tagged to a microparticle, comprising:
a single capillary flow carrier system for transporting the microparticle past a selected location;

a source of electromagnetic radiation for irradiating the substance tagged to the microparticle; and

a detection system for measuring fluorescent light emitted from the substance at the selected location.]

17. (amended) The device of claim [16] 1, including means for receiving the output signal from the detection device, processing the signal and providing an output representative of the amount of the fluorescent substance [wherein the source of electromagnetic radiation comprises a source of light].

18. (amended) The device of [claim] 16 or 17, including means for receiving and processing the output from the photodetector to analyze the Mie scattering peaks [wherein the source of light comprises a laser].

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conc. 19. (amended) The device of claim [16] 1, wherein the source of electromagnetic radiation comprises a source of light [a plurality of microparticles are individually transported past the selected location at a substantially uniform velocity].

20. (amended) The device of claim [16] 1, wherein the source of light comprises a laser [microparticle is an organism].

21. (amended) The device of claim [16] 1, wherein a plurality of microparticles are individually transported past the selected location at a substantially uniform velocity [the microparticle is a fluosphere].

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A3 22. (amended) The device of claim [23] 7, wherein the fluorescent substance is ingested by the filtro-feeder, and exposure of the filtro-feeder to the toxic substance affects the rate of ingestion of the fluorescent substance by the filtro-feeder.

25. (amended) The device of claim [24] 8, further comprising means for calculating the ingestion rate as a function of the amount of fluorescent light emitted from the fluorescent substance at the selected location.

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